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THE APPLICATION OF
SELF-MANAGEMENT TECHNIQUES
TO THE DEVELOPMENT OF SOCIAL
SKILLS IN PSYCHOTIC PATIENTS

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OF THE REQUIREMENTS FOR THE DEGREE
MASTERS OF ART
CLINICAL PSYCHOLOGY

BY
J. HENRY YOUNG, JR.
JULY 1976

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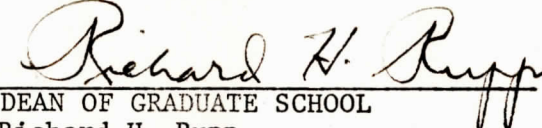
J. HENRY YOUNG, JR.

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PSYCHOLOGY DEPARTMENT CHAIRPERSON
Joyce G. Crouch


DEAN OF GRADUATE SCHOOL
Richard H. Rupp


COMMITTEE CHAIRMAN
James R. Deni


COMMITTEE MEMBER
Richard H. Levin


COMMITTEE MEMBER
James D. Long

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Self-Management

Abstract

In the present study, the self-management techniques of self-recording for token reinforcement and the reading of positive self-statements were used within an existing behavior modification token economy program on a ward of a psychiatric hospital to assist in the development of two isolated social skills. One male and two females served as subjects. Two of the subjects were classified as schizophrenic, chronic undifferentiated type, and one classified as schizoid personality disorder. Observational technique was a variable time sampling taken on a variable time interval. Token chips were used to reinforce smiling behavior and the initiation of verbal interaction on a continuous schedule in all conditions except for baseline and that condition which involved reading positive self-statements alone. Results indicated that self-recording for token reinforcement, the reading of positive self-statements, and self-reinforcement brought about an increase in identified social skills in two of three subjects. A combination of self-recording for token reinforcement and reading of positive self-statements appeared to have produced the most significant changes in the target behaviors, with positive self-statement reading alone next in effectiveness followed by self-recording for token reinforcement alone. Interreliability and reliability measures yielded maximal agreement and suggested that all subjects were using the techniques reliably.

Acknowledgements

I would like to thank Dr. Jim Deni for his counsel, encouragement, and direction in this undertaking. I also thank Dr. Richard Levin for his guidance and support and Dr. Jim Long for his suggestions and comments in editing. To Dr. Barry Naster I express my thanks for his assistance in developing and exactifying the mechanics of this study.

Last but not least I thank my family and friends for their patience with me and their support from the inception of this research to its sweet end.

Several lines from one of Bob Dylan's (1966) tunes come to mind naturally as I conclude this project, they are:

"here I sit so patiently

Waiting to find out what price you have to pay

To get out of going thru all these things twice."

To those graduate students working on their theses now or in the near future I can assure you that the answer to the quote above is blowing in the wind.

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Introduction

Externally oriented approaches to behavioral change have not placed as much emphasis upon active participation by patients themselves, as have the self-management approaches (Bandura, Grusec & Menlove, 1967; Bandura & Perloff, 1967; Hopkins, 1968; and Kanfer, 1970). In order that individuals accept and develop self-responsibility for their own behaviors, it follows that they must begin to rely less and less upon externally controlled variables (Bandura, et al., 1967). A self-managerial approach to change demands active participation and places the responsibility for change firmly in the patients hands (Atthowe & Krasner, 1968). Therefore, the self-management approach seems most acceptable in moving patients away from externally controlled conditions towards greater involvement by patients themselves. Behavior change using this approach is generally instigated by the therapist but carried out by the patient, who assumes the therapist role of observing his own behavior (Kanfer & Phillips, 1966).

Research in the area of self-management techniques has increased greatly in the past few years. Among the self-management techniques which have been widely examined and reported is self-recording (Bandura & Perloff, 1967; Goldiamond, 1965; Kanfer, 1970; Maletzky, 1974; Nelson & McReynolds, 1971; and Roberts, 1969). Kanfer (1970) discussed the question of the reliability of self-reports which have no external referents and the reactivity of self-monitoring. Kanfer considered some of the limitations of self-monitoring. He felt that because self-monitoring was

of a subjective nature, it could not lend itself to use in evaluating behavior therapy techniques. Kanfer (1970) stated that self-monitoring had been effective in modifying behavior, but that its controlling variables had not yet been explored. Though Kanfer's (1970) article was critical, he ended on a positive note. His closing statements supported self-regulation from the standpoint of theory and he concluded that investigation in this area promises to add significantly to our understanding of individuals' capacity to adjust their own behaviors without continued external control.

Self-monitoring techniques have been applied to a number of behaviors including: the control of eating (Stollack, from McFall, 1970); smoking (McFall, 1970; Roberts, 1969; Rutner, 1967, from Kanfer, 1970); poor studying behavior (Goldiamond, 1965; Williams & Long, 1975); marital difficulties (Goldiamond, 1965); repetitive scratching, fingernail biting, inappropriate classroom behavior, facial tics (Maletzky, 1974); and inconsistent self-medication (Thomas, Note 2), to mention a few.

In McFall's (1970) research of self-monitoring of normal smoking behavior, he explored reactivity, which is the tendency of certain experimental operations to function as an unintended, independent source of influence on the behavior being measured. In McFall's study, observers monitored S's smoking frequency and duration throughout base-rate, experimental and return to base periods. In the experimental period, Ss monitored their own frequency of smoking or not smoking. Smoking frequency and duration were significantly affected by the self-monitoring, suggesting that self-monitoring is indeed a reactive data gathering procedure (McFall, 1970).

While the preceding studies involving self-monitoring or self-recording dealt with populations of "normals," other researchers have applied self-monitoring techniques to "psychotic" populations. For example, in a study conducted by Rutner and Bugle (1969), a hospitalized patient exhibiting hallucinatory behavior was subjected to a self-monitoring procedure with and without social reinforcement. After 16 days of treatment, reported hallucinations were extinguished with no remissions reported for approximately 6 months. Other aspects of the patients' behavior also showed improvement.

In addition to self-monitoring, token or external reinforcement has been effectively applied to "psychotic" populations. On an 86 bed closed ward in a Veterans Administration hospital, Atthowe and Krasner's (1968) 2-year study incorporated many important phases of ward life into a contingency program. Patients were reinforced with tokens for engaging in self-care, attending activities, interacting with others, and demonstrating responsible behaviors. Tokens were exchangeable for such things as passes to movies and well located beds. The results at the end of one year indicated a significant increase in the reinforced, desired behaviors with a general improvement in patient initiative, responsibility, and social interaction.

In another study dealing with "psychotic" patients on a token economy, Wincze, Leitenberg and Agras (1972) determined the effects of token reinforcement and feedback on delusional verbal behavior of 10 chronic, paranoid schizophrenic patients. Feedback was found to be effective nearly 50% of the time in reducing delusional talk, but produced adverse reactions

in at least 3 cases. Token reinforcement showed more consistency than did feedback and reduced the percentage of delusional talk in 7 out of 9 subjects who received this treatment. The effects of both token reinforcement and feedback were thought to be quite specific to the applied environment, however. Both showed little generalization to other situations (Wincze, et. al, 1972).

The effective application of self-recording techniques to both "normal" and "psychotic" populations has been demonstrated in the results presented. Token reinforcement enjoys wide application and has been determined as effective with "psychotic" populations. In addition the use of positive self-statements and self-reinforcement has exhibited effectiveness in increasing target behaviors. Thus the use of self-recording, positive self-stating, and token reinforcement have all been researched and found to be effective methods of obtaining positive behavioral changes.

Positive self-statements, also referred to as self-verbalizations, have been effectively used in programs designed to assist in increasing feelings of self-esteem, suggesting that such statements are reinforcing and helpful in improving such target behaviors (Williams & Long, 1975).

In a 1967 experiment, Bandura, Grusec and Menlove tried to determine the social conditions under which the highest standards of self-reward with tokens would occur. Children were exposed to an adult model who had superior performances and had adopted a high criterion of self-reward on a bowling task. The isolated variables in this (1967) study were the amount of nurturance exhibited by the models, the social reinforcement of the models high standard setting and the absence or presence of a peer model who

had adopted a low standard of self-reward. Results suggested that a combination of the influence of low nurturance, vicarious positive reinforcement, and the absence of competing peer standards produced the strongest pattern of self-reward (Bandura et. al, 1967).

Regardless of the nature and design of any study, total control of all possible intervening variables is relatively impossible. With this in mind, a consideration of several weaknesses in some of the preceding studies is presented below.

In the Wincze, Leitenberg and Agras (1969) study of delusional verbal behavior, the target behavior was not operationally defined, raising the question as to the validity of the measures taken. No reliability checks were conducted of the nurses' recordings which were the only measure of "sick talk" provided. This lack of control increased the probability of lessened validity, inconsistent data collection and a lack of empirical reliability. Wincze et al. (1969) used separate pools of questions for each subject to measure the severity of delusional beliefs. Because these subjects fostered differing delusional systems, "sick talk" was inconsistently defined and could not be measured or compared as it was across subjects with much validity.

The present study differs from the (Wincze et. al, 1969) study in several ways. First, both target behaviors were operationally defined for clarity. Secondly, both reliability and interreliability checks were made to insure against error and experimenter bias, and to allow for additional verification of behavioral frequency. Thirdly, in dealing with the measurement of behavioral frequency, all subjects were given matched re-

coding cards and behavior relevant positive self-statements.

In the Rutner and Bugle (1969) study of the modification of "psychotic" behavior, the data reported and presented were subject collected. Unlike the present study no reliability checks were made, thus the reported results were questionable concerning both reliability and validity. In Atthowe and Krasner's (1968) study of contingent token reinforcement procedures on a "chronic" psychiatric ward, there were many intervening variables. There was inconsistency in the token economy and in the manipulations and social reinforcements practiced. The variety of approaches used across psychologists and staff members made as isolation of the specific agent or agents of change nearly impossible. In the present study the token economy and the experimental manipulations were held constant.

A factor ignored in all of the studies presented was the use of a pre- or posttest to determine subjects' level of competency in using the techniques. Because of the omission of pre- and posttests in the studies presented here, it cannot be assumed that subjects used self-recording correctly. Thus, there is some doubt on the validity and reliability of all of the self-collected data presented. Because all subjects were unfamiliar with self-management techniques, no pre-test was necessary in this study. A posttest was administered, however, with a predetermined competency level requirement.

Smiling and initiating verbal interactions were both reinforced in the present study to increase their frequency of occurrence. Self-recording has been previously determined as a reactive stimulus (McFall,

1970; Kanfer, 1970). Kanfer (1970) and McFall (1970) defined a reactive stimulus as one which causes change in self-recorded behaviors, whether or not the change is intended. Effective application of self-recording to behavioral problems supported its use in the present intervention. Because reactive stimuli were desirable in this study, self-recording was applied to both smiling and the initiation of verbal interaction, in hopes of effecting an increase in these responses.

Rogers (1951) proposed that realistic self-evaluations constitute a significant step toward personality growth (Kanfer, Page & Duerfeldt, 1969). Because self-recording is a type of self-evaluation, self-recording itself has the potential to assist in personality growth. Increases in self-esteem often accompany personality growth. Personality growth and self-esteem are seen as important aspects of the foundation from which social skills develop. In view of the assumed relationship between feelings of self-esteem and social skills, studies dealing with self-esteem demand our attention. In Williams and Long's (1975) review of literature on self-management, they reported that positive self-verbalizations had been effectively used in increasing feelings of self-esteem. It was hypothesized in the present study, that through self-reinforcement in the form of positive self-statements and token reinforcement, that two isolated social skills would develop. A generalized increase in self-responsibility was also hypothesized.

The Premack Principle was used in the reinforcement paradigm of this experimental study. The Premack Principle (Watson & Tharp, 1972) states that when engagement in a frequently occurring or high probability

behavior is made contingent upon engagement in a less frequently occurring or lower probability behavior, that the lower probability behavior is more likely to occur. In this experiment the two target behaviors, smiling and the initiation of verbal interaction, were the low probability behaviors while self-reinforcement was the high probability behavior. Engagement in self-reinforcement was thus made contingent upon engagement in either smiling or the initiation of verbal interaction. Skinner's (1953) concept of self-reinforcement suggests that much of our learned behavior is maintained by earlier reinforcement experience and that reliance on external reinforcers is unnecessary once the behavior becomes part of our repertoire. Thus, it would seem that individuals who have developed the capacity to serve as their own sources of reinforcing stimuli can self-reinforce through the manipulation of their external environment and the use of internal or covert reinforcement.

This study explored the use of behavioral techniques, specifically self-recording for token reinforcement and the reading of positive self-statements. Tokens and social praise were used as external reinforcement in this study while self-recording and positive self-statements served as internal or intrinsic reinforcement. Through the manipulation of self-recording for token reinforcement and positive self-statement reading, it was hypothesized that an increase in smiling and the initiation of verbal interaction responses could be brought about in 3 psychiatric hospital residents exhibiting low frequencies of these two behaviors. The target behaviors were seen as relatively low in these residents, and an increase was seen as fundamental if resociali-

zation was to be accomplished.

Applied research is that kind of research which deals with matters of value and concern to society on a practical level (Baer, Wolf, Risley, 1968). The research which has been undertaken in this study is of this type. When one considers the instances of institutionalization in which individuals in psychiatric hospitals assume only the basic levels of intellectual and emotional functioning, the value of research and intervention in this area becomes apparent. Chaplin (1968) defines institutionalization as an individual's adaptation to the patterns of behavior characteristic of an institution. When an individual assumes the behavior patterns of a psychiatric hospital then he excludes from his behavior repertoire some of those behaviors which are necessary for adequate functioning outside of the hospital.

When an environment does not supply sufficient reinforcement for certain behaviors, individuals frequently begin exhibiting a very narrow and limited behavioral repertoire (Lazarus, 1968). Insufficient reinforcement for the use of social skills might well lead to a reduction in frequency of these behaviors. Still another possible reason for the development of a narrow and limited behavioral repertoire is the infrequency with which many hospitalized psychiatric patients are called upon to take the responsibility for their own behaviors (Robinson & Lewinsohn, 1973). Pressure is being placed on state psychiatric hospitals to demonstrate accountability and to place more patients back into society, therefore resocialization becomes necessary and more important (Atthowe & Krasner, 1968), in the field of psychology and

psychiatry. A systematic and consistent application of self-management techniques to two social skills behaviors of chronically maladjusted individuals appears to hold great promise towards resocialization and future re-entry into society.

The following questions were explored in this experiment.

1. Will self-recording, for token payment, of smiling behavior by psychotic residents be reliable?
2. Will self-recording, for token payment, of the initiation of verbal interaction by psychotic residents be reliable?
3. Will self-recording as the only manipulation of smiling and the initiation of verbal interaction for token payment increase the frequency of each behavior?
4. Will reading a positive self-statement as the only manipulation increase the frequencies of the monitored behaviors from their baseline levels?
5. Will a combination of both positive self-statement reading and self-recording, for token payment, increase the target behaviors from their baseline levels?
6. Will a combination of positive self-statement reading and self-recording for token payment be more effective in increasing the frequencies of the target behaviors than self-recording for token payment alone?
7. Will a combination of positive self-statement reading and self-recording for token payment increase the target behaviors more than a positive self-statement alone?

Method

Subjects

The subject population consisted of two females and one male. Two subjects were classified as schizophrenic, chronic undifferentiated type, and one as schizoid personality disorder. All subjects (Ss) were patients institutionalized in a North Carolina state psychiatric hospital on a behavior modification token economy ward. These Ss were chosen over others because of their low frequency of emitted social skills behaviors. Therapeutic intervention involving resocialization and future community placement was intended.

S1 was a 30 year old black female, institutionalized for the past four years. S1 had two previous admissions to a state psychiatric hospital. She was diagnosed and classified as a schizophrenic, chronic undifferentiated type. Treatment during previous admissions included chemotherapy and psychotherapy. Presently treatment involves chemotherapy on a behavior modification token economy program. Medication included: Prolixin Enathlate, 50 milligrams every two weeks; Tofranil, 25 milligrams tid; Navane, 10 milligrams hs; Thorazine, 300 milligrams hs; Cogentin, 1 milligram tid. S1 had been stabilized on these medications prior to the onset of this study, and it was held constant throughout. Her activities included: work in the hospital dining room, game night participation, movie attendance, music therapy, bus rides, and sports events attendance. A suggested target behavior found in standard hospital progress notes was the development of more appropriate social interactions.

S2 was a 59 year old white male, institutionalized for the past 16 months. He had three previous admissions to a state psychiatric hospital. He has been diagnosed and classified as a schizophrenic, chronic undifferentiated type. Treatment during the several admissions included insulin coma therapy and chemotherapy. He is presently being treated on a behavior modification token economy program. Medication had been discontinued for 7 months and was not reinstated for the duration of this study. His activities included: industrial therapy in a sheltered workshop, game night participation, movie attendance, bus rides, and attendance at sports events. Standard hospital progress notes suggested that "S2 did not socialize often and was withdrawn, although he had reportedly improved in this area since his drug elimination was completed," Progress (Note 1).

S3 was a 20 year old white female, institutionalized for the past two years in a state psychiatric hospital. She has had one previous admission. She had been diagnosed and classified as having a schizoid personality disorder. Treatment during previous admissions included psychotherapy and chemotherapy. She is being treated on a behavior modification token economy program. She has been off medication for 27 months at the time of this writing. Activities included: youth activities program participation, industrial therapy, work in the canteen, game night attendance, movie and sports events attendance, plus bus rides and work on the ward. Standard hospital progress notes stated that S3 did not initiate social interaction or conversation with others. She had been observed to go to extremes to avoid direct eye

contact and social interactions. She stated that she was afraid to leave the hospital in a conversation with a ward nurse. Standard hospital progress notes suggested that her main goals were development of good eye contact, initiating conversation or at least recognition of others, statements expressing a positive feeling about her job and duties, appropriate facial expression, and showing initiative.

Even though this program was free of any deleterious effects, or punishers, consent forms were attained to meet the legal requirements, which state that no patient be forced to participate in any program in which they do not choose to participate. Subjects were asked to sign consent forms at the completion of the first two days of training, at which time all subjects had received a detailed explanation of what their participation in the program would entail. Treatment of all subjects was in accordance with the published ethical standards of the American Psychological Association (Martin, 1974).

Behavioral Definitions

Two behaviors were chosen as the dependent variables: smiling and the initiation of verbal interaction. Smiling was defined as a slight opening of the lips, an upward turn of the corners of the mouth, and an increase in the protrusion of the skin covering the cheek bones (Hopkins, 1968). Initiation of verbal interaction was defined as verbal interaction lasting for at least two seconds initiated by the S, within a five foot proximity of the person to whom the interaction was directed.

Table 1

Individualized Experimental Schedules for
Smiling and Initiation of Verbal Interactions

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
Subject 1																																						
S B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
IVI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Subject 2																																						
S B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
IVI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Subject 3																																						
S B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
IVI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Smiling Behavior																																						
Initiation of Verbal Interaction																																						
Baseline																																						
Combination of Self-Recording for Token Reinforcement and Reading Positive Self-Statements																																						

Self-Management

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Procedure

The experimental design consisted of a multiple baseline measurement. See Table 1 for individualized experimental schedules. This design controlled between Ss for conditions and within Ss for time. The multiple baseline design assisted in the avoidance of a reversal condition which might have perpetuated an undesirable return to low frequencies of social skills behaviors. It also made possible the identification and measurement of two responses simultaneously. Experimental variables were applied to one behavior, then another (Baer, Wolf & Risley, 1968). In this manner experimental and baseline conditions could be compared, increasing reliability and specificity because of the more accessible isolation of the effectants of change.

The order of the independent variables (self-recording and the reading of positive self-statements) was reversed between S1 and S2. S3 received only the combination of both independent variables. The alternation of variables between subjects was done to control for a possible additive effect. It was hoped that this alternation would facilitate an evaluation of the effectiveness of each variable.

Baseline

Baseline observations for each of three Ss were collected over a 10 and 15 day period to establish the stability of frequency from smiling and the initiation of verbal interaction, respectively. There were 38 days of data collection with a total of three days of training. All data were collected on the hospital wards. At the conclusion of baseline observations, subjects were informed that engagement in the self-management program would enable them to occasionally earn tokens at times other than

those provided for on their present token economy.

Each S was told that he was chosen as part of a program designed to help him take a more active role in his own treatment. Instructions were kept constant across Ss to prevent them from becoming a confounding variable.

Instructions

Individual instructions were given to each S in the techniques of self-recording and the reading of positive self-statements. See appendices C, D and E for individual training instructions and appendices F and G for behavior relevant positive self-statements. The recording cards used in this study are found in Appendix H. Positive self-statements were kept constant across Ss. During training the researcher made recordings of the behaviors for each S and demonstrated the correct procedure to follow in making the recordings for relevant conditions, much as Johnston and Johnston (1970) did in their study of the modification of consonant speech sound articulation in young children. Instances of behaviors which should have been recorded were pointed out to Ss during training. After training, Ss were required to demonstrate their competency in recording the instances of the target behaviors. Ss followed the self-management procedures step by step, in their own examples of situations in which they might engage in one or both of the target behaviors. They also gave verbal explanations for each of the steps taken. During training, social reinforcement was used exclusively. The researcher instructed each S for two days for approximately 20 minutes each day in the initial condition, and for approximately 20 minutes on one additional day at the onset

of experimental condition 2. After training, a post test performance of 95% or better was required of all Ss in order that they proceed to experimental conditions. In experimental conditions where positive self-statements were to be made, all Ss were told to read a behavior relevant positive self-statement, beginning with the first and moving down the list for each successive self-recording. Ss were also told that, if there were statements that they preferred over others, they could reread them as many times as there were numbers representing them on the reverse side of the recording card.

Reinforcement

A schedule of continuous reinforcement was used in all conditions except one. In conditions involving self-recording, token chip reinforcement was used on a fixed ratio 5 schedule. In conditions involving positive self-statement reading and recording alone, self-reinforcement was intrinsic rather than material. Social praise was held as constant as possible across Ss and conditions. The value of the token chips earned during these experimental manipulations was one-fifth of that attributed to the token system in operation prior to the commencement of this study. For every five recordings of the desired behavior, one token chip was paid. For every five token chips earned, five points were punched on the Ss' economy card as a reimbursement for the turned in token chips. The cards used in this study were a different color than those used on the operating token economy program though the same size. The tokens were identical to those in use prior to this study. Tokens were exchangeable for food, clothing, sleeping facilities, home visits, field trips, concession items

and other special privileges.

Reliability measures

Reliability checks were made during baseline and each of the experimental conditions on a variable time sampling schedule, because this schedule lent itself most efficiently to the monitoring of several Ss and the measurement of several behaviors at one time. The researcher was on the ward frequently at times other than the experimental periods, in order to avoid his presence becoming a discriminative stimulus. Ss were approached on a random schedule and asked how many times they had self-recorded and/or positively self-stated, depending on the S and the experimental conditions. The experimenter noted at this time how many recordings the S had made and observed him continuously for a 30 minute period. At the end of this period, the experimenter again asked the S how many recordings he had made and used this data to determine the percentage agreement between himself and the S. Further approaches and questionings of Ss were carried out by health care technicians and the experimenter on occasions other than recorded observation periods. This was done to help prevent these questionings from becoming a discriminative stimulus for Ss to use the techniques more conscientiously.

Data analysis

Percentage agreement was computed by dividing the larger number of behavioral recordings into the smaller number of recordings, for both smiling and the initiation of verbal interaction. Comparisons were made between the experimenter and S and between the experimenter and a naive observer. Experimental data was analyzed through determination of the

mean score during base condition, condition 1 and condition 2. Any changes and their direction were computed through subtraction between the means of the two conditions being compared, and through the use of a one tailed t test for mean differences. A naive observer was used in ascertaining interreliability measures controlling for possible experimenter biases. Correctness or incorrectness of recordings by Ss was considered only in the reliability checks conducted and did not effect monetary (token) reinforcement.

All observations were made during four hour periods each day, approximately five days a week, between the hours of 5:00 and 9:00 p.m. This time period was held constant throughout the study.

At the end of the four hour observation periods, Ss were required to report to the nurses station to present personal recording cards, at which time they were to receive tokens for engagement in the self-management program. The researcher was present for reinforcement of the Ss on numerous occasions during each experimental condition. The experimenter or attendants reinforced Ss with token chips soon after the presentation of their cards, generally before Ss went to bed on the night of the recordings.

At the conclusion of this study, Ss were asked if they felt they could use self-recording and the reading of positive self-statements in controlling their behavior. They were also asked if they had any suggestions as to how this program might be altered in future attempts to make it more easily understood and used by others. The purpose of the study was explained to them, and they were told that they could request to have the self-management techniques worked permanently into their program of treatment.

Results

The results obtained in this three-subject multiple baseline designed experiment support the hypothesis that the chosen self-management techniques can bring about increases in two isolated social skills behaviors in two of three Ss. A consideration of the previously stated seven questions follows. Each of the questions will be restated and the answers will be listed after each question. Those answers which have been dealt with through the use of charts or graphs will have the appropriate references.

1. Will self-recording, for token payment, of smiling behavior by psychotic residents be reliable?

Yes. A high percentage of the reliability and inter-reliability checks suggested that self-recording, for token payment, of smiling was carried out reliably. Note in Tables 2-7 the days on which reliability and inter-reliability checks were made. Also see Appendix A for a clear representation of the percent reliability and inter-reliability obtained per S, per behavior and per condition.

2. Will self-recording, for token payment, of the initiation of verbal interaction by psychotic residents be reliable?

Yes. A high percentage of the reliability and inter-reliability checks suggested that self-recording, for token payment, of the initiation of verbal interaction was carried out reliably. See Tables 2-7 for determination of the days on which reliability and inter-reliability checks were made. Refer to Appendix A for a clear representation of the percent reliability and inter-reliability attained per S per behavior and per

Table 2
Smiles Engaged In by S1

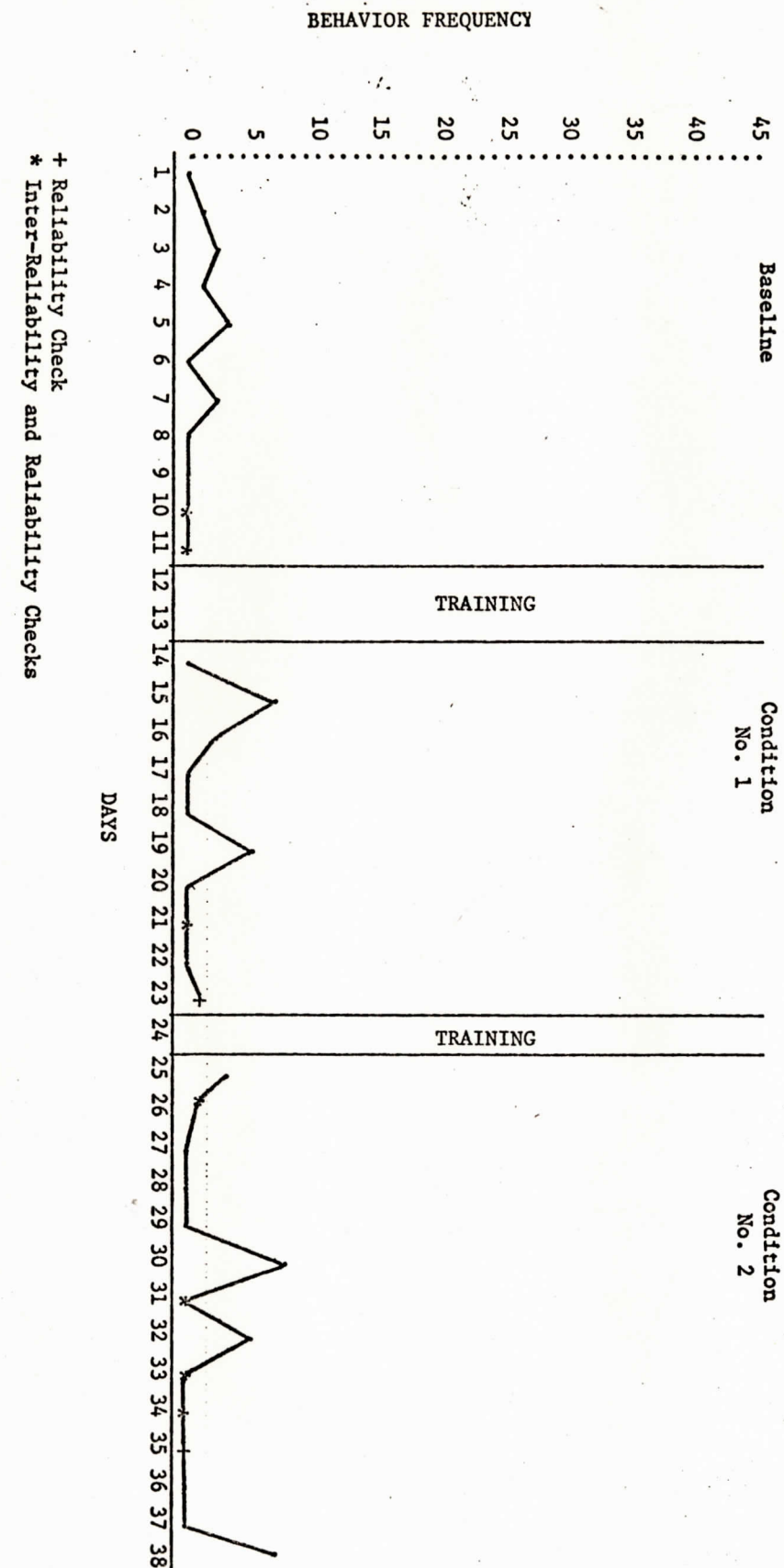


Table 4
Smiles Engaged In by S2

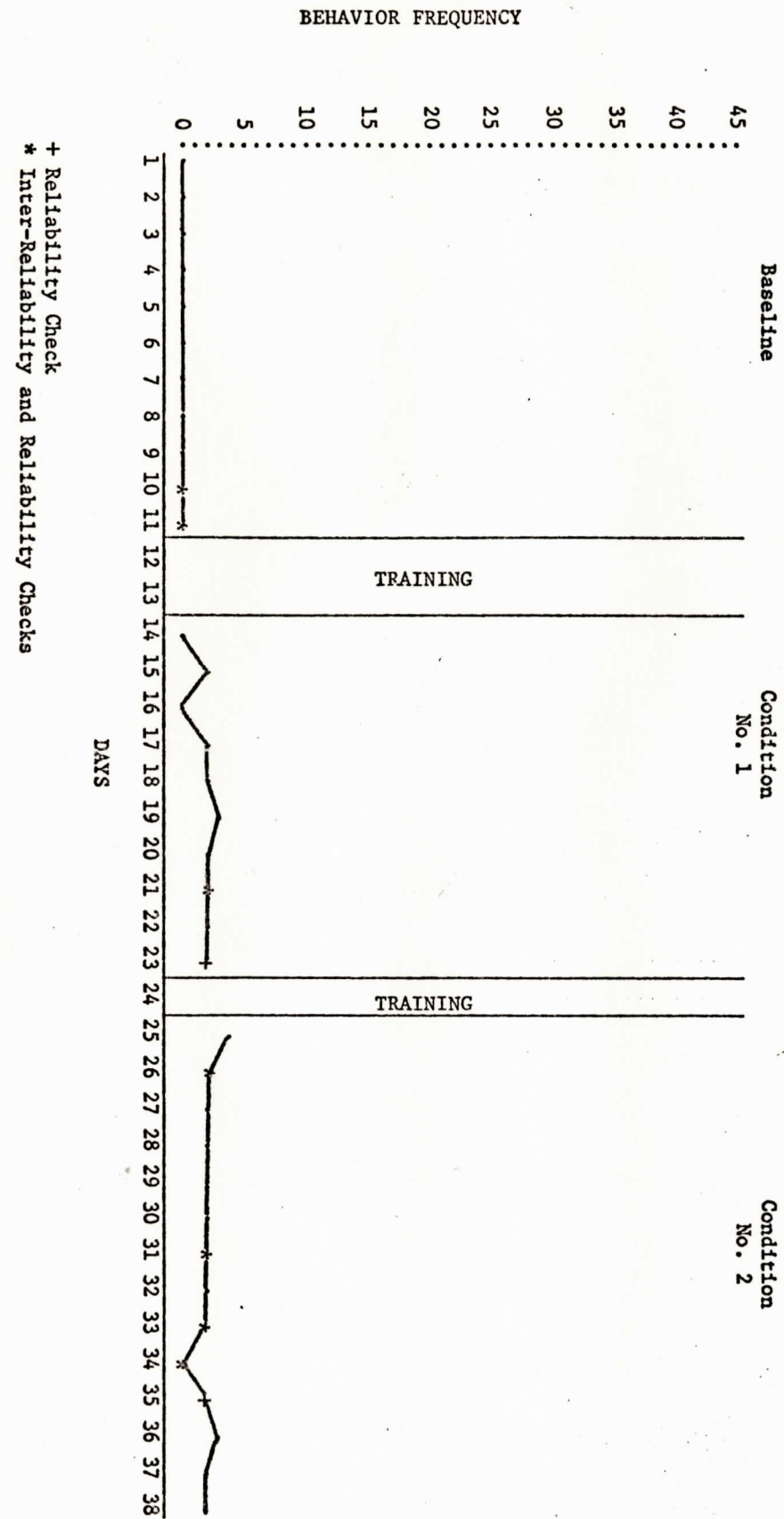


Table 3
Verbal Interactions Initiated by S1

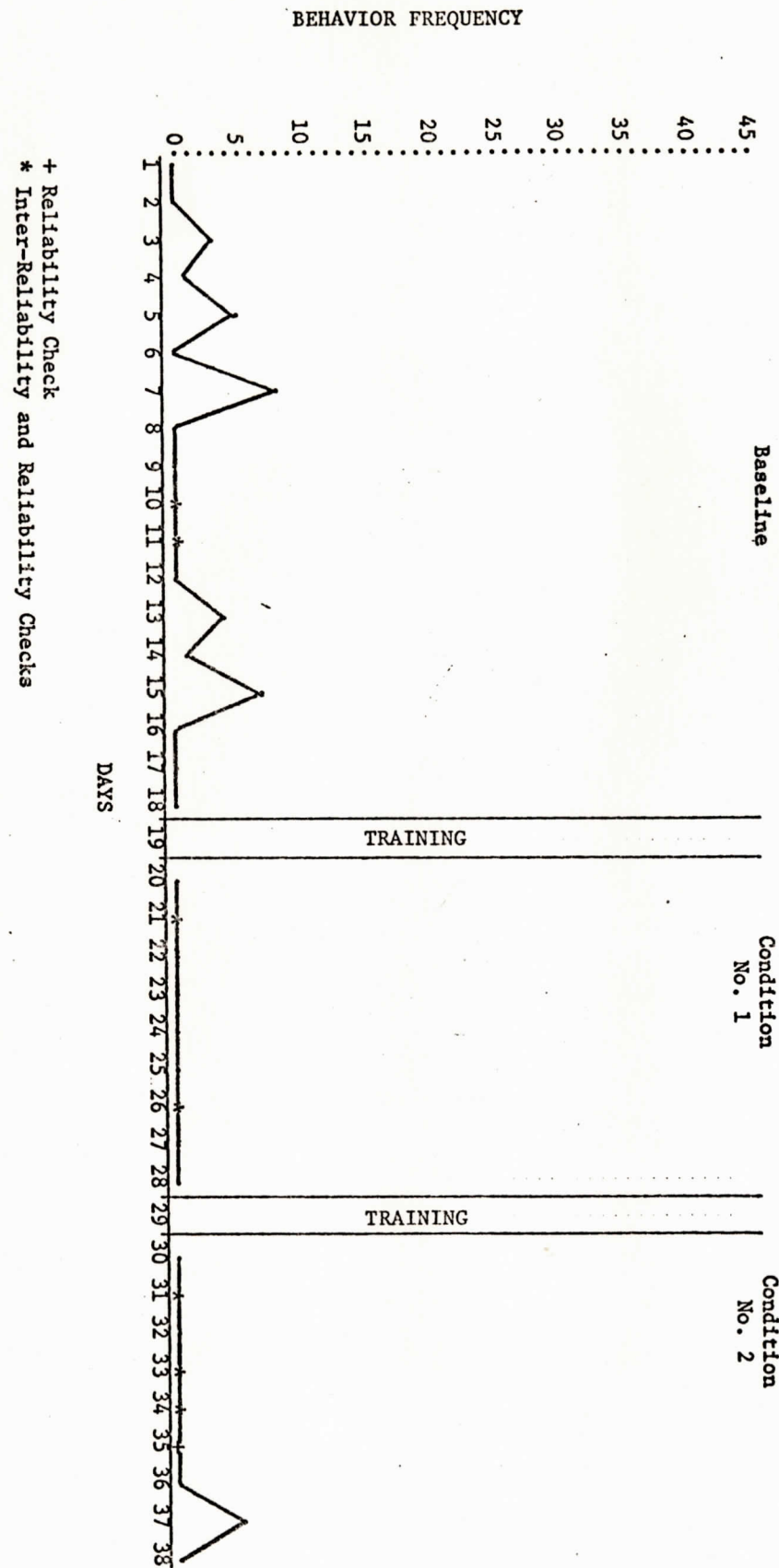


Table 6
Smiles Engaged In by S3

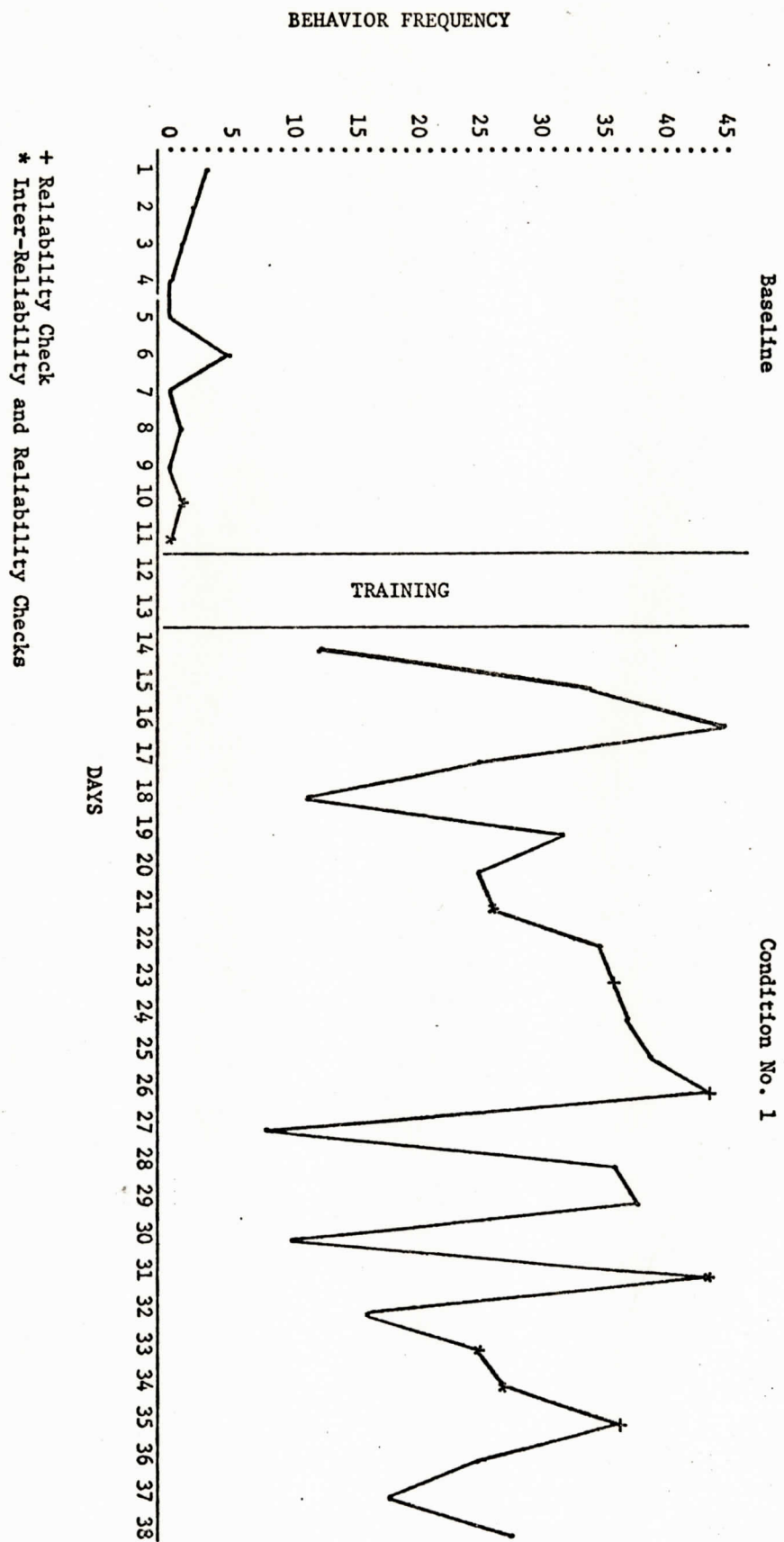
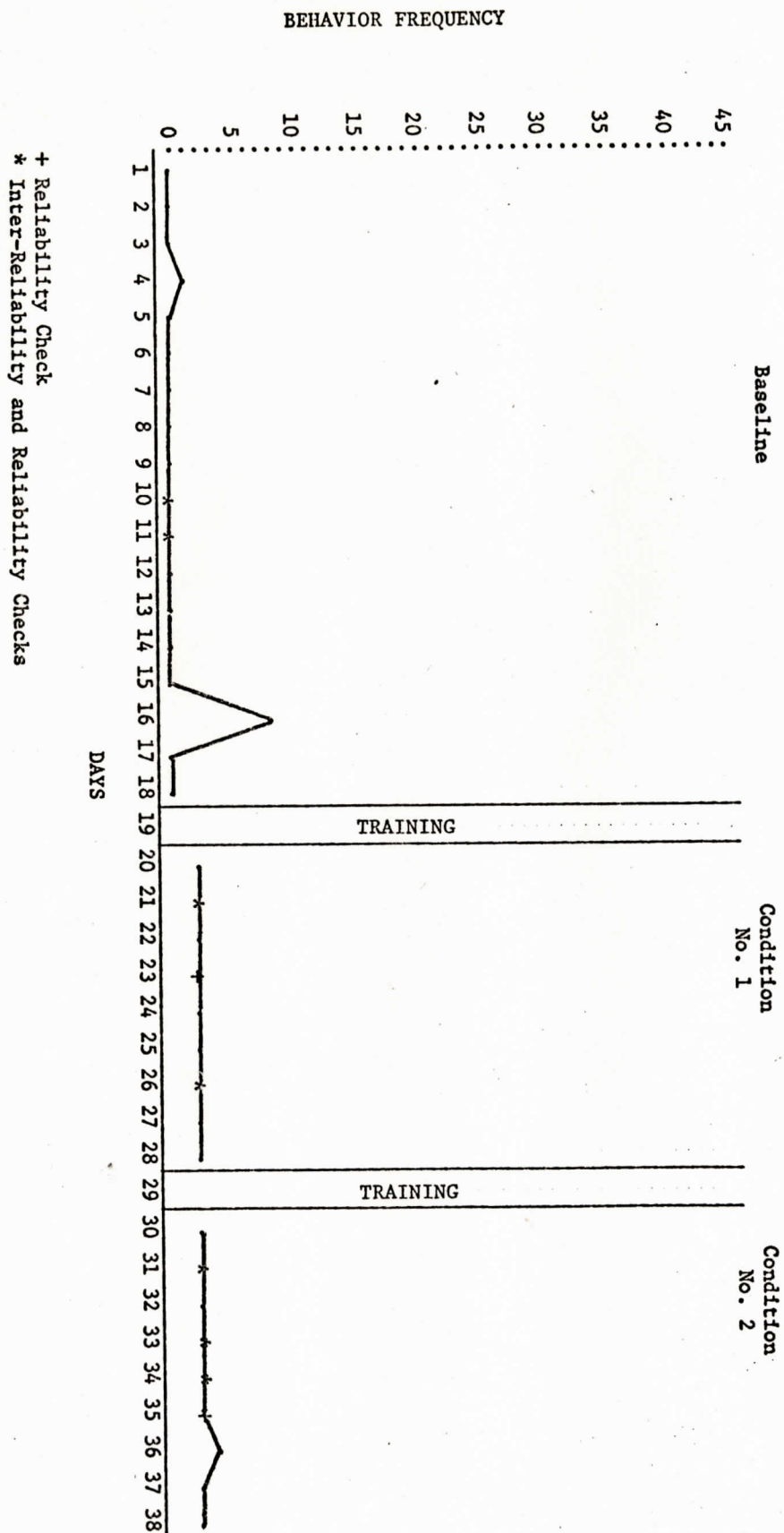


Table 5
Verbal Interactions Initiated by S2



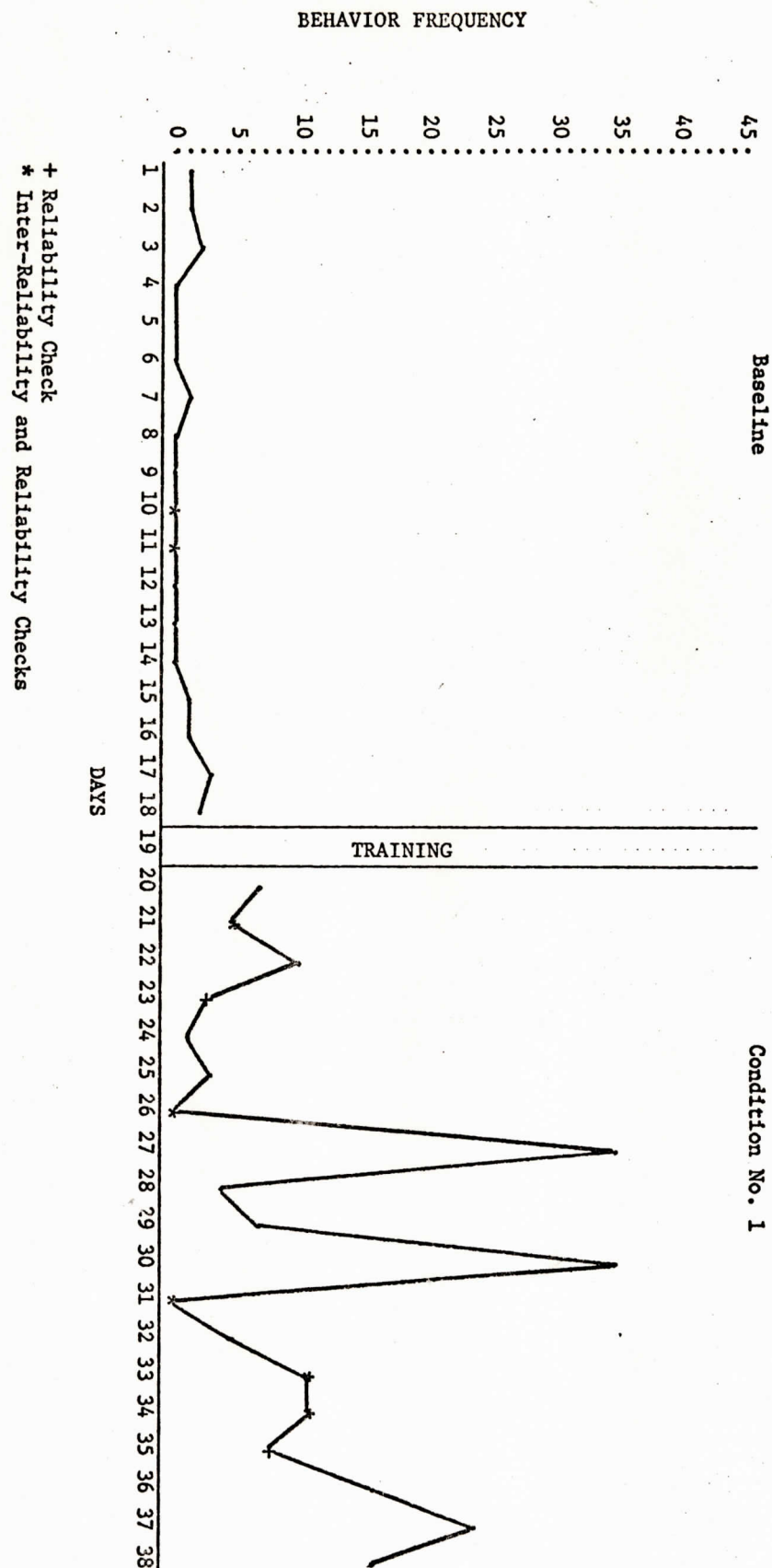


Table 7
Verbal Interactions Initiated by S3

condition.

3. Will self-recording, as the only manipulation of smiling behavior and the initiation of verbal interaction for token payment increase the frequencies of each of these behaviors?

Self-recording for token payment, as the only manipulation was used only with S1 and was found to increase the frequency of smiling from its baseline level. However, S1's frequency of initiation of verbal interaction decreased when self-recording was introduced. See Table 1, for determination of when the techniques were being used by S1 when the mean scores found in Table 8 were attained. Also, see Tables 2-7 for a clear presentation of the raw data indicating daily frequency recordings. These tables represent the data which was self-collected by the residents themselves. See Table 8 for a clear presentation of the attained mean score frequencies. Refer to Table 9, to view the levels of significance which occurred between each condition within each S for each of the target behaviors.

4. Will reading a positive self-statement as the only manipulation, increase the frequencies of the behaviors monitored from their baseline levels?

This question was relevant only to S2 because he was the only S to use positive self-statements alone as a manipulation. The reading of a positive self-statement, as the only manipulation, was found to increase the frequencies of the target behaviors from their baseline levels. Refer to Table 1, to learn what condition involved positive self-statement reading as the only manipulation. Also see Table 8 for a listing of the obtained

Table 9

Across Condition Comparisons of Mean Frequencies
Within Subjects for Changes in Target Behavior

Condition	t score	df	p
Subject 1			
S.B.	.82	19	.25
C1/C2	.13	22	.25
B/C2	.93	23	.25
I.V.I.	1.50	26	.25
B/C1	.41	17	.25
C1/C2	.77	25	.25
B/C2			
Subject 2			
S.B.	6.07	19	.0005*
C1/C2	1.33	22	.25
B/C2	10.70	23	.0005*
I.V.I.	2.18	26	.025*
C1/C2	3.00	17	.005*
B/C2	2.48	25	.0005*
Subject 3			
S.B.	8.06	34	.0005*
B/C1	3.92	35	.005*
I.V.I.			
B/C1			

S.B. = Smiling Behavior

C1 = Condition #1

I.V.I. = Initiation Verbal Interaction

C2 = Condition #2

* = Significant at or above .05 level

B = Baseline

Table 8

Mean Frequencies of Smiling and Initiation
of Verbal Interaction

	Baseline	Condition 1	Condition 2
Subject 1			
S.B.	.82	1.50	1.64
I.V.I.	1.61	.30*	.55*
Subject 2			
S.B.	.00	1.70	2.14
I.V.I.	.50	1.81	2.11
Subject 3			
S.B.	1.18		28.52
I.V.I.	.61		10.42

* This subject was the only one to exhibit any decreases in frequency and this second response was the only one to decrease after the onset of experimental conditions.

S.B. Smiling Behavior

I.V.I. Initiation of Verbal Interaction

mean frequencies per behavior and condition for each subject. On Table 9 are the changes in mean frequency between conditions and within subjects for each target behavior and their level of significance.

5. Will a combination of both positive self-statement reading and self-recording, for token payment, increase the target behaviors from their baseline levels?

This condition applies to all Ss, because all Ss received a combination of both conditions. A combination of both positive self-statement reading and self-recording, for token payment was found to increase the target behaviors of all subjects with both behaviors except in S1. When this combination was begun with S1 for the initiation of verbal interaction, this behavior showed a decrease in frequency from the baseline level. See Table 1 for determination of when this combination experimental condition was in effect. Review Table 8 to learn what mean frequencies were attained during this condition for all Ss, and Table 9 for a clear presentation of changes in mean frequency and their level of significance between conditions and within subjects.

6. Will a combination of positive self-statement reading and self-recording for token payment be more effective in increasing the frequencies of the target behaviors than self-recording for token payment alone?

Yes. This question applies only to S1. It was found that a combination of positive self-statement reading and self-recording for token payment increased the target behaviors frequencies more significantly than did the use of self-recording for token payment alone. Table 1 presents

the schedule of when the relevant experimental conditions were in effect. Look to Table 9 to find a clear representation of the behavior mean frequency changes and their level of significance between conditions and within Ss.

7. Will a combination of positive self-statement reading and self-recording for token payment increase target behaviors more than a positive self-statement alone?

Yes. This question was relevant only to S2. A combination of positive self-statement reading and self-recording for token payment increased the frequencies of the target behaviors more than reading positive self-statements as the only manipulation. Table 1 indicates when these two conditions were in effect for S2. View Table 9 for the obtained changes in mean frequencies within Ss and between conditions, and their level of significance.

Both methods; self-recording for token payment and the reading of behavior relevant positive self-statements were found to be effective for two out of three Ss in all conditions in increasing the frequencies of smiling and the initiation of verbal interaction responses. Only S1 exhibited any behavioral frequency decrease. The decrease in verbal interaction occurred at the onset of condition 1, after self-recording for token payment had already begun for smiling behavior. Table 3 clearly represents this decrease for S1 from baseline to condition 1 and from baseline to condition 2. The experimental condition which brought about the most significant increases in behavioral frequency consisted of a combination of self-recording for token payment and the reading of behavior

relevant positive self-statements. This combination of conditions 1 and 2 was more effective with both target behaviors, than either of these conditions alone. The second most effective experimental condition for bringing about increases in target behaviors was the reading of positive self-statements alone, followed by self-recording for token payment alone.

The mean frequencies of smiling and the initiation of verbal interaction during baseline and experimental conditions were computed for all Ss. For a clear representation of these attained mean frequencies, refer to Table 8. The reader will notice that there were only two mean frequencies listed for S3 rather than three as with S1 or S2. This difference in format was followed with S3 because she had only one experimental condition which combined both of the two manipulations throughout her experimental period. S1 and S2 differed in this respect because they had an initial condition involving only one of the experimental manipulations and then a final condition which consisted of both of the conditions combined. In computing the changes in frequency, the means found in Table 8 were subtracted to determine the direction, and whether in fact, any changes had occurred. Mean differences, were compared between baseline and condition 1, baseline and condition 2, baseline and a combination of conditions 1 and 2, and between conditions 1 and 2. These comparisons were made across conditions for both smiling and the initiation of verbal interaction and within all Ss. For a concise presentation of the resulting differences, see Appendix A. Reading from left to right, changes occurring between baseline and condition 1 appear in column 1; changes occurring between condition 1 and condition 2 are found in column 2; changes between

baseline and condition 2 are located in column 3 and differences between baseline and the combined experimental conditions 1 and 2 are found in the fourth column.

Because these mean difference computations were general and imprecise, a t-test for evaluating the significance of differences between means was used. These statistical analyses yielded the probable significance levels of each of the behavioral frequency changes. A significance level at or above the .05 level was attained in seven of 14 comparisons. Significant changes in mean frequencies were present in only S2 and S3. Table 9 clearly represents the results of within subject and across condition comparisons. S1 showed increases in mean behavioral frequencies across conditions, however, these were not statistically significant. S2 showed significant behavioral frequency increases in all across condition comparisons, except for one. This statistically insignificant increase occurred when a comparison was made between the mean frequencies of conditions 1 and 2. The largest increases were obtained when comparisons were made between baseline and condition 1 and baseline and condition 2 for smiling and then again when comparison was made of baseline and condition 2 for the initiation of verbal interaction responses. All of these comparisons were significant at the .001 level. Comparisons of S3's behavioral mean frequencies between baseline and condition 1 for smiling and the initiation of verbal interaction were .001 and .01 respectively. S3's smiling responses apparently responded more significantly to manipulations than did S3's initiation of verbal interaction responses.

As we consult the individualized behavioral frequency charts found in Tables 2-7, we can see obtained changes. S1's behavioral frequency for

smiling behavior showed no gradual increases in condition 1 or 2. The increases are thought to be random fluctuations, though still higher than the baseline level. S2's initiation of verbal interaction shows an obvious and consistent decrease in behavioral frequency as we view Table 3. Referring to Table 4 we can see that S2's smiling frequency increased from the baseline level in condition 1 and did stabilize towards the end of condition 1 and throughout condition 2. S2's initiation of verbal interaction frequency appears very stable and consistent at the start of experimental manipulations and this frequency is maintained until the termination of this study. Moving to Table 6 for S3's smiling frequency, an increase is observed, though irregular in frequency and lacking in graduality of increase. It is apparent that a change in frequency occurred at the onset of experimental manipulations. The frequency of initiation of verbal interactions for S3, (Table 7) indicates that an increase in behavioral frequency occurred at the onset of experimental conditions and was maintained throughout this condition. The increase was erratic but generally higher than the baseline frequency level for the duration of this condition.

Health care technicians reported significant improvements in two Ss's social behaviors towards other residents and staff, after the implementation of this program. Those observations, however, were not documented by systematic measurements.

Resocialization defined as an increase in the frequencies of identified social skills was realized in all Ss. However, statistically significant increases were not obtained in all conditions or with all Ss. The condition involving self-recording alone did not yield significant increases

nor were the manipulations effective at the .05 level with S1. Placement back into society was attained in two out of the three subjects. S3 who had stated that she was afraid to leave the hospital at the start of this study discharged herself from the hospital several weeks after its conclusion. S1's family decided that she was ready to leave the hospital and they took her back home. S2, the oldest of the Ss, still remains in the hospital at the present time.

The posttests given to each S at the conclusion of training periods resulted in a competency level of 95% or above for all Ss and with both self-recording for token reinforcement and the reading of positive self-statements.

Discussion

The results of this study support the hypothesis that self-recording for token payment and the reading of behavior relevant positive self-statements could effectively increase smiling and the initiation of verbal interactions in two out of three psychotic, institutionalized patients.

The experimental condition which was found to be most effective consisted of a combination of self-recording for token reinforcement and the reading of behavior relevant positive self-statements.

The reading of behavior relevant positive self-statements was included in both the condition which was determined as most effective in bringing about a target behavior increase, and in that condition found to be second most effective. Based on these data, the single most effective independent variable would seem to be the reading of positive self-statements. The high reinforcing value of positive self-statements, when paired

with self-recording for token reinforcement yielded the greatest increase in behavioral frequency. An inference drawn from this was that this combined condition was superior to the others because it allowed for both external or token reinforcement and internal or self-reinforcement in the form of positive self-statements. This condition provided maximal benefits for subjects and thus it seemed appropriate that the largest gains were obtained when this condition was in effect.

While self-recording for token reinforcement was also included in the most effective experimental condition, when it was singly applied to the target behaviors with S1, no significant increases resulted. This consequence infers several possible conclusions. Self-recording, though a novel requirement of the residents, was reinforced with tokens. Because S1 was familiar with token use from previous exposure and experience, the reinforcing value of tokens may have been minimized. In fact, S2 exhibited no change whatsoever in behavioral frequency between the condition in which no token reinforcement was available and that one in which tokens could be earned. Another possible cause for the insignificant changes was that token reinforcement was not sufficiently high to motivate S1 to strive to earn them. The tasks may have been perceived to be so demanding that engagement in them was unwarranted by the available reinforcement.

All conditions effected increases in two of three Ss for both behaviors. Behavioral increases were largest at the onset of the first experimental conditions and are believed to have resulted from the injection of a new duty into the residents behavioral repertoire. This original

adjustment may have provoked interest in the residents and facilitated their initial engagement in the program.

One possible reason for the decrease obtained in S1's behavior may have been due to the amount of reinforcement available. While one of this S's target behaviors climbed after baseline and remained higher than baseline throughout experimental conditions, the second behavior decreased at the commencement of experimental condition 1. S1 may have gained sufficient reinforcement to maintain self-management technique use with one behavior but not with two behaviors. Another possible and more likely reason for S1's decrease in this second behavior is that S1 was receiving large amounts of medication. S1 reported frequent difficulty in getting up in the mornings and in concentrating even for short periods of time. This fatigue and lack of concentration may well have brought about the decrease in her frequency of the initiation of verbal interaction, and her insignificant increases in target behavior frequency.

The question could be asked, are the behavioral frequency increases a function of time rather than the effectiveness of the experimental manipulations? Referring to the obtained mean frequencies (see Table 8) we find that the largest mean frequencies are found in the final conditions for all Ss with both target behaviors, except for one. As stated earlier, S1 exhibited a decrease in mean frequency in condition 2 for the initiation of verbal interaction. S2's frequency appears to be more of a stabilization than a random fluctuation or increase. It is difficult to ascertain whether or not this stabilization is due to time or experimental manipulation. As Table 4 indicated though, no gradual increase occurred in S2's

smiling behavior frequencies. It might be noted that S2 is the oldest in this study. It would seem that his behaviors might be more resistant to change because of his age. Though his behavior did significantly change, it was at a consistently low level of frequency. S2's initiation of verbal interaction as seen in Table 5, apparently began and maintained itself at a steady frequency level. Judging from the change which occurred and remained from the very onset of experimental conditions, it appears that these conditions brought about the increase in frequency rather than the time factor alone. As we look to S3's smiling frequency in Table 6 and verbal interaction in Table 7 an increase is observed. Because of the immediacy of the increase in frequency at the onset of experimental conditions, the assumption follows that the manipulations rather than a time element, brought on the increases.

Generally, in S3's initiation of verbal interaction, the behavioral frequency during condition 1 was erratic, however the last eight days of data point to a gradual increase. Whether or not this increase was a function of time or experimental manipulation is uncertain. However, due to the rapid onset of a behavioral increase beginning upon the application of experimental condition 1, the experimenter-researcher concluded that the techniques were effecting the increase.

Several of the residents had difficulty remembering to record their engagement in target behaviors. Difficulty in remembering to self-record suggested a probable need for additional days of training in order that use of the techniques be more effectively engrained into the subjects behavioral repertoire. Prior research determined that there is a positive

correlation between length of training and effective participation by Ss (Kanfer & Marston, 1963). Though the researcher-experimenter in the present study was aware of this finding, the length of training was shortened. An original five day training period was planned, but abandoned after two days, due to the high rate of S success on competency tests, and their beginning signs of boredom. Studies such as this one involving training with psychotic populations might do well to utilize long training periods.

Within this study, social praise was used, but neither systematically nor equally across Ss. In a natural setting outside a psychiatric hospital, social reinforcement would occur in similarly inconsistent amounts and intensities. Since resocialization was a goal of this study, the erratic social reinforcement was seen as an advantage rather than a disadvantage. This inconsistent use of social reinforcement is thought to have perpetuated an emphasis upon self-reinforcement and self-responsibility on the subjects parts, both of which are thought to be fundamental skills in the resocialization process.

Bandura, Grusec, and Menlove's (1967) study suggested that a combination of low nurturance, vicarious positive reinforcement and the absence of competing peer standards was the best type of environment in producing self-reinforcement. In agreement with this, no competing peer standards were present in this study. This was adhered to in order to encourage feelings of freedom and self-responsibility in residents towards self-control and self-reinforcement of their own behaviors. All residents were dealt with individually and were not aware of which other residents

were participating in the program.

Increases in feelings of self-esteem can result from positive self-verbalizations (Williams & Long, 1975). Those who have experienced increases in self-esteem due to positive self-verbalizations, are those who find positive self-verbalizations reinforcing. Positive self-statement reading was paired with engagement in target behaviors in hopes of increasing the target behavior frequency. This increase was hypothesized from the Premack Principle (Watson & Tharp, 1972) which states that when a less frequently occurring or low probability behavior is repeatedly followed by a more frequently occurring or high probability behavior, then the less frequently occurring behavior is more likely to recur due to the reinforcing values of the high probability behaviors through the development of reinforcing consequences for the less frequently occurring behavior.

Questionings as to how many self-recordings and positive self-statements had been made by Ss, were scattered throughout the experiment. This was done in order to avoid the experimenter's presence and inquiries from becoming a discriminative stimulus for Ss to more conscientiously self-record or read positive self-statements.

The results found in this study were significant for many reasons. Ss who are not motivated to change are obviously a more difficult population with which to work, and this attitude characterized this experimental population. One patient refused to sign the consent form until speaking with the director of the Behavior Modification Token Economy Ward. She was hesitant even then, but did sign the forms after being assured of the positive nature of the experiment and the benefits of such a program in

assisting in her treatment. Though this patient's behaviors showed the least significant increases in frequency, her social skills behaviors did increase from their baseline level. She was taken home by her family several weeks after the conclusion of this study, because they felt that she was ready to return home.

Self-monitoring techniques have been used in decreasing negatively valenced behaviors in the majority of the articles presented in this study. The experimenter-researcher has effectively applied self-monitoring techniques to positively valenced behaviors in effecting a positively directioned behavioral change. This study has therefore widened the applicability of self-monitoring techniques to include positively valenced behaviors in addition to negatively valenced behaviors. Successful use with a psychotic population adds additional significance to the positively directioned behavioral increases because of the severity of these patients' maladjustments.

Self-management appears to hold great promise in the treatment of both positively and negatively valenced behaviors for increases and decreases respectively and with populations of "normals", "neurotics" and "psychotics" as well. This wide range of applicability compounds the utility of such an approach to behavioral intervention and control.

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APPENDIX B

Mean Differences Between Experimental Conditions

	Baseline and Condition 1	Condition 1 & Condition 2	Baseline and Condition 2	Baseline and 1 & 2 Combined
Subject 1				
S.B.	+ .68	+ .14	+ .82	+ .76
I.V.I.	- 1.31	+ .25	-1.06	-1.19
Subject 2				
S.B.	+ 1.70	+ .44	+2.14	+2.04
I.V.I.	+ 1.31	+ .30	+1.61	+1.45
Subject 3				
S.B.	+27.34	XXX	XXX	XXX
I.V.I.	+ 9.81	XXX	XXX	XXX

Note: These differences resulted from the subtraction of the mean frequencies found in Table 2.

XXX: These boxheads were not applicable to this subject because there was only one experimental condition.

S.B.: Smiling Behavior

I.V.I.: Initiation of Verbal Interaction

APPENDIX A

Percent Agreement

Day	10			11			21			23			26			31#			33			34			35		
Type of Check	R	IR	R	R	IR	R	R	IR	R	IR	R	R	IR	R	IR	R	IR	R	IR	R	IR	R	IR	R	IR	R	
<u>S1</u>																											
Smiling	X	X	X	X	100	86	100	100	100	0	100	0	100	0	100	X	X	X	X	X	X	X	X	X	X	X	
Inf. Ver. Inter.	X	X	X	X	100	83	100	100	90	100	0	100	0	100	0	50	X	X	X	X	X	X	X	X	X	X	
<u>S2</u>																											
Smiling	100	100	X	X	100	100	100	100	100	100	0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0	
Inf. Ver. Inter.	100	100	X	X	100	100	100	100	90	100	0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0	
<u>S3</u>																											
Smiling	100	100	100	100	100	100	100	100	100	100	0	100	100	100	100	100	0	100	100	100	100	100	100	100	100	100	
Inf. Ver. Inter.	100	100	100	100	100	100	100	100	100	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	

R = Reliability checks (between experimenter and subject)

IR = Inter-Reliability checks (between experimenter and naive observer)

= All Ss were participating in game night activities and neglected to make any recordings of either target behavior. However, the observers continued to make behavioral recordings.

* = S3 was performing manual labor on the ward and did not have her recording cards on her person at all times. The experimenter therefore made several recordings of S3's engagement in target behaviors which S3 failed to record.

X = No recordings were made.

APPENDIX C
INDIVIDUALIZED INSTRUCTIONS
S1

SMILING
SELF-RECORDING

SUBJECT #1--CONDITION #1 (Day 16-Day 25)

You are going to begin a program of self-management, which is designed to help you take a more active part in your treatment. Through the learning of practice of self-recording, you will be able to earn extra tokens on the token economy program. You know, of course, that the program you are in now is the token economy. During the hours of 5 and 9 p.m. each evening you will be asked to participate in this program. You will be given tokens for your participation in this program from time to time.

This program is designed for you and its aim is to help you learn something called self-management techniques, so that you can manage any aspect of your behavior that you might choose.

First, I will explain to you how to make self-recordings. Say, for example, that you want to find out how many times you smile each day. OK, in order to get an accurate, good, or correct measure of that behavior, you would need to count the number of times that you smile. First, you need to define clearly what smiling involves. This may seem silly because most everybody knows what smiling is, but this program demands that it be defined, so please bear with me. You decide that smiling will be defined as a slight parting of the lips, an upward turn of the corners of the mouth, and an increase in the protrusion of the

skin covering the cheek bones. The skin on the cheeks sticks out farther. QUESTIONS? (EXPLAIN THIS BACK TO ME) Now that we have defined smiling, we can move on to the counting of these instances (occasions) (occurrences). OK, you will be supplied with a personal recording card and a pencil to make your recordings with. (PASS THESE OUT NOW) Each time that you smile, (as it has been defined) you are to circle a number on the personal recording card that you have been given. (UNDERSTAND?)

(SHOW THEM THE NUMBERS TO BE CIRCLED AND DEMONSTRATE)

FOR EXAMPLE: You are sitting reading a science fiction magazine and you realize that you are smiling. You take out your recording card and circle the number 1 because this is the first self-recording that you have made. Later, when you are relaxing, you realize that you are again smiling. (AS IT HAS BEEN DEFINED) You again pull out your personal recording card and pencil and circle a number, which would be #2 this time since this is the second self-recording that you have made. As in the two instances just mentioned, each time that you smile, you would circle the next number. FOR EXAMPLE: 3 4 5 6 7 8 9 and on up to however many times you smile. QUESTIONS? EXPLAIN THIS BACK TO ME.

DEMONSTRATE THIS FOR THEM, i.e., smile and then self-record myself with them watching. NEXT, get them to do this. HAVE THEM DO FOUR (4) PRACTICE TRIALS.

Just as in the examples given you are to self-record your smiling behavior. Now, remember, before we can get a correct count of the number of smiles, we must first give a clear definition of SMILING, RIGHT? Once again, we will define smiling as: A slight parting of the

lips, an upward turn of the corners of the mouth and an increase in the protrusion of the skin covering the cheek bones. (UNDERSTAND?) (DEMONSTRATE THIS FOR THEM) (HAVE THEM DEMONSTRATE SELF-RECORDING AND SMILING RESPONSE CORRECTLY FOR YOU FOUR TIMES (4).)

TEST--SMILING SELF-RECORDING

Directions: I want to determine how well you have understood these instructions. I am going to give some examples of the smiling response. You are to record my responses, but only when they are in agreement with the definition of smiling which you have been given. This may seem funny to you, but just bear with me. (SUBJECTS MAY SMILE NOW. WHEN THEY DO, GIVE SOCIAL REINFORCEMENT FOR THEIR SMILES EVERY TIME.)

- | | |
|---------------------------------|---------------------|
| 1. A clear smile | 4. A smile response |
| 2. A frowning response | 5. A smile response |
| 3. A staring response, no smile | |

INITIATION OF VERBAL INTERACTION SELF-RECORDING

SUBJECT #1--CONDITION #1 (Day 21-Day 30)

OK, you have been using self-recording with your smiling responses for several days now. ANY PROBLEMS? QUESTIONS? Today I want you to learn how to use self-recording with another behavior; the initiation of verbal interaction. Said more simply, this means the number of times that you start a conversation with another person. Do you know what conversation means? (Define if necessary.) Like we did with the smiling responses, you remember, we had to define the behavior that we were going to be working with. The initiation of verbal inter-

action will be defined as: conversation started by you, lasting for at least two (2) seconds, and within five feet of the person to whom you are directing your conversation or statements.

DEMONSTRATE THIS FOR THEM SEVERAL TIMES (FOUR TIMES) 1. Five feet, 2. ten feet, 3. not directed at them, 4. five feet.----Now do you understand this definition well enough to make these self-recordings yourself? QUESTIONS? EXPLAIN THE PROCEDURE BACK TO ME.

TEST--INITIATION OF VERBAL INTERACTION SKILLS SELF-RECORDING

Directions: I want to see how well you understand the instructions that I gave you. Following will be a couple of examples of starting conversation. You are to record the number of times that I start a conversation. BUT ONLY WHEN THEY AGREE WITH THE DEFINITION OF THE INITIATION OF VERBAL INTERACTION RESPONSE THAT WAS GIVEN TO YOU. READ THE DEFINITION FOR THEM AGAIN.

1. Interact, but not within a five (5) foot proximity.
2. Interact, a clearly initiated verbal interaction.
3. Talk to a picture.
4. Interact, a clearly initiated verbal interaction.
5. Interact, but not within a five (5) foot proximity.

NOW HAVE THE SUBJECT DEMONSTRATE FIVE (5) EXAMPLES OF THE RESPONSE.

Beginning today, you are to add to your program of self-recording, the initiation of verbal interaction. That is, now not only will you self-record your smiling responses as you have been doing for the past five days, but now add starting conversation to your recording practices. FOR EXAMPLE: You are sitting in the main room and you smile

at another resident. You take out your recording card and make a self-recording of this smile. You have something to say to the other resident and you start a conversation. When you realize that you have done this, you record this on your recording card. UNDERSTAND? You now will be making self-recordings for both smiling and starting conversation.

DEMONSTRATE FOR THE RESIDENT. HAVE RESIDENT DEMONSTRATE THIS FOR YOU.

GIVE RESIDENT FIVE EXAMPLES. HAVE RESIDENT DEMONSTRATE HIS UNDERSTANDING FIVE (5) TIMES.

SUBJECT #1--CONDITION #1 (DAY 21-DAY 30)

INITIATION OF VERBAL INTERACTION
SELF-RECORDING

TEST

1. A smile alone. (SELF-RECORD)
2. An initiation of verbal interaction. (SELF-RECORD)
3. Smile AND initiate verbal interaction. (SELF-RECORD THEM BOTH)
4. Initiate verbal interaction. (SELF-RECORD)
5. Smile AND initiate verbal interaction. (SELF-RECORD THEM BOTH)

GIVE SEVERAL OTHER EXAMPLES (4) OF A COMBINATION OF BOTH OF THE BEHAVIORS AND SELF-RECORD THEM BOTH.

SMILING
POSITIVE SELF-STATING

SUBJECT #1--CONDITION #2 (DAY 26-DAY 40)

Today we are going to learn another method of self management. This method is the reading of a positive self-statement. It involves

simply this: Each time that you smile, you will be required to read a positive self-statement, which will be supplied to you.

Now in this program, not only will you be required to read a positive self-statement, but you will also be required to circle the number of the statement that you read. Let me explain this more clearly to you and then you can ask any questions that you think of about reading and recording these statements. The positive self-statements which you will be supplied with (HAND OUT) will be numbered from (1) one to (13) thirteen. Some rows of numbers will be found on the back of the recording card. Each number represents (stands for) a statement. Notice that there are several rows of these thirteen numbers. These rows have been arranged this way so that if you read through all of the statements and have circled all of the numbers on one row, then you can go to the next row and begin circling the numbers which represent the statements again. UNDERSTAND? Another reason for these rows of numbers is that you may like a sentence better than the others and may want to read it more than one time. In this case, you would need to have another number to circle. FOR EXAMPLE: Say that you have read statements 1 through 3 and you really do like the #3 statement. The next time you go to read another positive self-statement you decide that rather than moving on and reading positive self-statement #4, you would rather read statement #3 again. All you would have to do is to go down to the next line on the recording card (SHOW THEM) and circle #3 when you had read that statement, aloud. UNDERSTAND? QUESTIONS? DEMONSTRATE THIS FOR THEM WITH SMILING POSITIVE SELF-STATEMENT.

HAVE THEM DEMONSTRATE THIS FOR YOU, FOUR TIMES (4).

Now that you have learned how to read and record positive self-statements correctly, you are to keep on recording your frequency of smiles like you have been doing, and also you are to read one of these self-statements aloud each time you smile. Each time you do smile, you are to self-record this on your recording card and then read one (1) of these statements aloud. After you read a statement aloud you are to record the number of that statement. UNDERSTAND? DEMONSTRATE THE BOTH OF THEM FOR THE SUBJECTS. HAVE THE SUBJECT DEMONSTRATE A GRASP OF THE COMBINED CONCEPTS TO YOU FOUR (4) TIMES. DEMONSTRATE (3) TIMES ***** HAVE THEM DO IT (1) TIME DEMONSTRATE (3) MORE TIMES***** HAVE THEM DO IT (2) TIMES DEMONSTRATE (2) MORE TIMES ***** HAVE THEM DO IT (1) TIME DEMONSTRATE (1) TIME ***** HAVE THEM DO IT (1) TIME DEMONSTRATE (1) TIME ***** HAVE THEM DO IT (3) TIMES QUESTIONS?

INITIATION OF VERBAL INTERACTION
SELF-RECORDING AND POSITIVELY SELF-STATING

SUBJECT #1--CONDITION #2 (Day 31-Day 40)

OK, you have been using a combination of self-recording and reading and recording positive self-statements with smiling behavior, for about five days now. ANY PROBLEMS? QUESTIONS? Today you are to begin using both of these techniques with your starting conversations as well as your smiling.

This will mean that your smiling and your starting conversation will be handled in the same manner. FOR EXAMPLE: You are resting in

the hallway in a chair and another resident comes along. You smile at this resident. When you realize that you have smiled, you take out your recording card and circle a number on that card. As your instructions have said, you read a statement and circle the number of that statement on the back of the card. Another resident walks by you and you speak to her for a few minutes or seconds. Under these new conditions you would record starting conversation on your card as you have been doing, and then read a statement from the starting conversation recording card and circle the statement number. Just as the smiling statements have been listed from 1 to 13 on the smiling recording card, so have some statements for starting conversation been listed on the recording cards. SHOW HER WHERE THEY ARE LOCATED. After you have read one of the statements, you circle the number of that statement on the back of the card. DO YOU UNDERSTAND? DEMONSTRATE FOR THE SUBJECT THE USE OF THE TWO SELF-MANAGEMENT TECHNIQUES WITH BOTH SMILING AND THE INITIATION OF VERBAL INTERACTION. HAVE RESIDENT DEMONSTRATE A GRASP OF THESE DIRECTIONS BY GIVING FIVE (5) EXAMPLE SITUATIONS WITH BOTH BEHAVIORS INCLUDED.

MY DEMONSTRATION

1. A smile alone--(SELF-RECORD AND POSITIVELY SELF-STATE)
2. An initiation of verbal interaction response--(SELF-RECORD AND POSITIVELY SELF-STATE)
3. Smile AND initiate verbal interaction--(SELF-RECORD AND POSITIVELY SELF-STATE FOR BOTH RESPONSES)
4. Initiate verbal interaction--(SELF-RECORD AND POSITIVELY

SELF-STATE)

5. Smile and initiate verbal interaction--(SELF-RECORD AND
POSITIVELY SELF-STATE FOR BOTH RESPONSES)

APPENDIX D
INDIVIDUALIZED INSTRUCTIONS

S2

SMILING
POSITIVE SELF-STATING

SUBJECT #2--CONDITION #1 (Day 16-Day 25)

You are going to begin a program of self-management which is designed to help you take a more active part in your treatment. Through the learning and practice of self-management you will be able to earn extra tokens on the token economy program. This is the program you are on now. During the hours of 5 and 9 p.m. each evening you will be asked to participate in this program. Off and on throughout this program, you will be given tokens for your participation.

This program is designed for you and its aim is to help you to learn self-management techniques, so that you can manage any aspect of your behavior that you might choose.

First, I will explain to you how to use a method called reading and recording a positive self-statement. The method involves this: Each time that you engage in a particular behavior you will be required to read a positive self-statement, which will be supplied to you. FOR
EXAMPLE: Let's say that you are trying to gain more control over your smiling. Each time that you smile you would read a positive self-statement such as: 1. When I smile, other are nice to me; or 2. When I smile I am more attractive. UNDERSTAND? EXPLAIN THIS TO ME.

Now, in this program, not only will you be required to read these positive self-statements, each time you smile, but you will also be required to circle the number of that statement each time that you

read it. Let me explain this more clearly to you and then you can ask any questions that occur to you about reading or recording these statements. First we must have a clear definition of smiling. This may seem silly because most everybody knows what smiling is. This program demands that it be defined though, so please bear with me. We will define smiling as this: A slight parting of the lips, an upward turn of the corners of the mouth and an increase in the protrusion of the skin covering the cheek bones. Protrusion means that the skin on the cheeks sticks out farther. For each time that you smile (ACCORDING TO THIS DEFINITION) you are to read one of these statements aloud. These statements that you will be supplied with (HAND THESE OUT) will be numbered from 1 to 13. On the back there are rows of numbers from 1 to 13. Each number stands for a statement. On the other side of the card, these statements are listed one below the other. This arrangement has been used for two reasons: The first reason is that if you read through all of the statements and have circled all of the numbers on one row, then you can go to the next row and begin circling the numbers which represent each of the statements again. UNDERSTAND? EXPLAIN TO SUBJECT IF HE DOESN'T. Another reason for these rows of numbers is that you may like a sentence better than the others and may read it more than one time. You would need to have another number for that statement to circle. FOR EXAMPLE: Say that you have read statement #3 and you really like it better than the first two you read; the next time you smile and go to read one of the positive self statements you decide that rather than moving on and reading #4, you would rather re-read

statement #3 again. All you would have to do is to go down to the next line on the card and circle #3 when you have read the statement aloud. DEMONSTRATE THIS FOR THEM WITH SMILING--POSITIVE SELF STATEMENT.
HAVE THEM DEMONSTRATE THIS FOR YOU FOUR (4) TIMES.

YOU DEMONSTRATE (3) TIMES--S DEMONSTRATES (1) TIME

YOU DEMONSTRATE (2) TIMES--S DEMONSTRATES (1) TIME

YOU DEMONSTRATE (1) TIME--S DEMONSTRATES (3) TIMES

YOU DEMONSTRATE (3) TIMES--S DEMONSTRATES (1) TIME

YOU DEMONSTRATE (1) TIME--S DEMONSTRATES (2) TIMES

INITIATION OF VERBAL INTERACTION
POSITIVE SELF-STATING

SUBJECT #2--CONDITION #1 (Day 21-Day 30)

OK, now you have been reading and recording positive self-statements for five days now, with your smiling behavior. That is, for each time that you have smiled, between 5 and 9 p.m., you have read a positive self-statement aloud and have recorded this on your recording card. Today you are to begin to use this method with starting conversation. As you know, according to this technique, we must have a clear definition of the behavior under consideration. Our definition of starting conversation will be: conversation initiated (or started) by you, lasting for at least two seconds, and within five feet of the person to whom you are speaking.

Just as you have read a positive self-statement for each time you smiled, you will now be required to read a positive self-statement for each time that you start a conversation (as has been defined for you).

In other words you will be using the same technique for two different behaviors; smiling and starting conversation.

FOR EXAMPLE: You are sitting in a chair in the hallway and another resident comes along. You smile at this resident. When you realize that you have smiled, you take out your recording card and read aloud a positive self-statement. Next, you circle the number of the statement that you read. These numbers are found on the back of the card. (SHOW THEM.) EXAMPLE #2: Another resident walks by you and this time you speak to her for a few seconds or minutes. Under the new conditions, you would read a statement from your recording card and circle the number which represents this statement on the back of the card. DEMONSTRATE.

The arrangement of the positive self-statements on this recording card is the same as those listed on the card for smiling. They are to be circled just as you have been doing with and for the smiling.

ANY QUESTIONS? DO YOU UNDERSTAND?

DEMONSTRATE THIS FOR THE SUBJECT

HAVE SUBJECT DEMONSTRATE AN UNDERSTANDING OF THE USE OF BOTH TECHNIQUES

WITH BOTH OF THE TARGET BEHAVIORS. HAVE SUBJECT DEMONSTRATE THIS WITH

FIVE (5) EXAMPLES.

MY DEMONSTRATION

1. A smile alone--POSITIVELY SELF-STATE AND CIRCLE STATEMENT NUMBER.
2. An initiation of verbal interaction--POSITIVELY SELF-STATE AND CIRCLE STATEMENT NUMBER.

3. Smile AND initiate verbal interaction--POSITIVELY SELF-STATE FOR BOTH RESPONSES AND CIRCLE STATEMENT NUMBERS.
4. Initiate verbal interaction--POSITIVELY SELF-STATE AND CIRCLE STATEMENT NUMBER.
5. Smile and initiate verbal interaction--POSITIVELY SELF-STATE AND CIRCLE THE STATEMENT NUMBERS.

SMILING
SELF-RECORDING AND POSITIVE SELF-STATING

SUBJECT #2--CONDITION #2 (Day 26-Day 40)

Today we are going to learn another of the methods used in self-management programs. This method is called self-recording. It involves this: When a behavior occurs, you are to keep a record by circling a number on your recording card. OK, let's take an example: Say that you want to find out how many times that you smile each day. OK, in order to get an accurate or correct measure of your smiles, you would need to count the number of times you smile. In order to get this correct measure, remember we must first have as clear and precise a definition of smiling as we can. We will use the same definition of smiling as we have been using with the other examples. This definition once again is: A slight parting of the lips, an upward turn of the corners of the mouth and an increase in the protrusion of the skin covering the cheek bones. Protrusion means the skin sticks out more. (QUESTIONS?) (EXPLAIN THIS BACK TO ME) Now that we have defined smiling we can move on to counting these instances or occurrences. You will be supplied with a personal recording card and a pencil to

make your recordings with, just as you have been using for your reading and recording of positive self-statements. (PASS OUT THESE MATERIALS.) All-right now, each time that you smile (as we have defined smiling) you are to circle a number on the personal recording card which represents that statement. (UNDERSTAND?)

(SHOW THEM THE NUMBERS TO BE CIRCLED AND DEMONSTRATE)

FOR EXAMPLE: You are sitting reading a science fiction magazine and you realize that you are smiling. You take out your personal recording card and circle the number 1 because this is the first self-recording that you have made. Later, when you are relaxing, you realize that you are again smiling (according to the definition). You pull out your personal recording card and pencil and circle a number, which this time would be 2 since this is the second self-recording that you have made. As in the two instances just mentioned, each time that you smile, you would circle the next number. FOR EXAMPLE: 3 4 5 6 7 8 9 and on up, to however many times you smile. QUESTIONS? EXPLAIN THIS BACK TO ME. DEMONSTRATE THIS FOR THE SUBJECT, i.e., smile and then self-record yourself with Subject watching. NEXT, get Subject to do this in front of you. FOUR (4) PRACTICE TRIALS.

You are to continue to read a positive self-statement for each time that you smile. Also, you are to begin recording the number of times that you smile. In other words, for each time that you smile, you are to read a positive self-statement, circle the number representing that statement and circle a number on your frequency chart to keep count of the number of times that you smile. UNDERSTAND? DEMONSTRATE.

TEST-SMILING POSITIVE SELF-STATING AND SELF-RECORDING

DIRECTIONS: I want to determine how well you have understood these instructions. I am going to give some examples of the smiling response myself. You are to record my responses, when they are in agreement with the definition of smiling. I may look funny doing this exercise but that's OK. Just record my smiles when they are in agreement with the definition. REREAD THIS DEFINITION TO SUBJECT.

1. A clear smile response. (SELF-RECORD AND POSITIVELY SELF-STATE AND RECORD NUMBER.)
2. A frowning response
3. A staring response, no smile.
4. A smile response.
5. A smile response.

HAVE THEM DEMONSTRATE CORRECTLY FIVE EXAMPLES OF READING AND RECORDING POSITIVE SELF-STATEMENT NUMBER AND ALSO SELF-RECORDING THE FREQUENCY OF SMILING.

INITIATION OF VERBAL INTERACTION

SUBJECT #2--CONDITION #2 (Day 31-Day 40)

THIS SET OF INSTRUCTIONS IS IDENTICAL TO THOSE USED WITH

SUBJECT #1--CONDITION #2

EXCEPT TO SUBSTITUTE

INITIATION OF VERBAL INTERACTION

IN THE FINAL PARAGRAPH ON S #2 CONDITION #2

INSTEAD OF SMILING

(DAY 26-DAY 40)

TEST-INITIATION OF VERBAL INTERACTION SKILLS

You are now to be using both the reading of a positive self-

statement and the self recording technique with smiling AND the starting of a conversation. Under these conditions you will self-record both smiling and starting conversations as they occur and for each of these two behaviors you will read the appropriate positive self-statements.

DO YOU UNDERSTAND?

DIRECTIONS: I want to determine how well you have understood the instructions which have been given to you. I am going to give you some examples of starting conversation. You are to record the responses, but ONLY WHEN THEY ARE IN AGREEMENT WITH THE DEFINITION GIVEN FOR STARTING CONVERSATION. REREAD THE INITIATION OF VERBAL INTERACTION DEFINITION.

1. Interact, but not within a five (5) foot proximity.
2. Interact, a clearly initiated verbal interaction.
3. Talk to a picture.
4. Interact, a clearly initiated verbal interaction.
5. Interact, but not within a five (5) foot proximity.

NOW HAVE THE SUBJECT DEMONSTRATE FIVE (5) EXAMPLES OF THE RESPONSE INITIATION OF VERBAL INTERACTION.

APPENDIX E
INDIVIDUALIZED INSTRUCTION

S3

SMILING
SELF-RECORDING

SUBJECT #3--CONDITION #1 (Day 16-Day 40)

You are going to begin a program of self-management which is designed to help you take a more active part in your treatment. Through the learning of and practice of self-recording and the reading of positive self-statements, you will be able to earn extra tokens on the token economy program. The program you are on now is the token economy program. During the hours of 5 and 9 p.m. each evening you will be asked to participate in this program. Off and on throughout this program, you will be given tokens for your participation.

The program is designed for you and its aim is to help you to learn self-management techniques so that you can manage any aspect of your behavior that you choose.

First I will explain to you how to make self-recordings. Say for example that you want to find out how many times that you smile each day. OK, in order to get an accurate or correct measure of that behavior you would need to count the number of times that you smile. First, you need to define clearly what smiling involves. Anyone who has ever smiled, knows what a smile is, but according to the rules of self-management, we must have a written and clear definition of smiling, so please bear with me. Lets say that smiling will be defined as: A slight parting of the lips, an upward turn of the corners of the mouth and an increase in the protrusion of the skin covering the cheek bones. Protrusion means that the skin is sticking

out farther. QUESTIONS? (EXPLAIN THIS BACK TO ME.)

Now that we have defined smiling, we can move on to counting these instances (occasions) (occurrences). OK, you will be supplied with a personal recording card and a pencil to make your recordings with. (PASS OUT THESE MATERIALS.) Each time that you smile (as we have defined it) you are to circle a number on the personal recording card that you have been given. (UNDERSTAND?) (SHOW THEM THE NUMBERS TO BE CIRCLED) (DEMONSTRATE) FOR EXAMPLE: You are sitting reading a science fiction magazine and you realize that you are smiling. You take out your personal recording card and circle the number 1 because this is the first self-recording you have made. Later, when you are relaxing, you realize that you are again smiling. (ACCORDING TO THE DEFINITION) You pull out your personal recording card and pencil and circle a number which would be number 2 this time since this is the second self-recording that you have made. As in the two instances just mentioned, each time that you smile, you would circle the next number: for example, 3 4 5 6 7 8 9 and on up, to however many times you smile. QUESTIONS? EXPLAIN THIS BACK TO ME. DEMONSTRATE THIS FOR THEM, i.e., smile and then self-record and let them watch. NEXT: GET SUBJECT TO DO THIS WITH ME WATCHING. PRACTICE TRIALS FOUR (4).

In this program you are to use self-recording with smiling behavior. Now remember, before we can get a correct count of the number of smiles, we must first give a clear definition. Smiling will be defined as: A slight parting of the lips, an upward turn of the corners of the mouth and an increase in the protrusion of the skin covering the cheek bones. That means that the skin sticks out more. OK? (UNDERSTAND?) DEMONSTRATE FOR THEM.

(HAVE THEM DEMONSTRATE SELF-RECORDING AND SMILING RESPONSE CORRECTLY FOUR (4) TIMES.

SMILING
SELF-RECORDING

SUBJECT #3--CONDITION #1 (Day 16-Day 40)

TEST-SMILING

Directions: I want to determine how well you have understood these instructions. I am going to give these some examples of the smiling response. You are to record my responses, but only when they are in agreement with the definition of smiling which we have decided upon. REREAD THIS DEFINITION TO THEM.

1. A clear smile response. (SELF-RECORD)
2. A frowning response.
3. A staring response, no smile.
4. A smile response. (SELF-RECORD)
5. A smile response. (SELF-RECORD)

In this program you are to use another self-management technique along with self-recording. This technique is the reading and recording of positive self-statements. This method involves this: Each time that you smile, you will be required to read a positive self-statement and record it. I will supply you with these statements.

Let me explain this more clearly to you and then you can ask any questions that occur to you about the reading and recording of positive self-statements. The positive self-statements which you will be supplied with (HAND OUT!) will be numbered from (1) one to (13) thirteen. These numbered

statements will be found on your recording card. (SHOW THEM ON THE CARD THEY HAVE IN FRONT OF THEM.) OK, now on the back of these cards you will notice that there are several rows of numbers, one below the other. This arrangement has been used so that if you read through all of the statements and have circled all of the numbers on one row, then you can go to the next row and begin circling the numbers which represent the statements again. UNDERSTAND? Another reason for this arrangement is that you may like one statement better than the others and may want to read it more than one time. In this case you would need to have another number to circle. FOR EXAMPLE: Say that you have read statements 1 through 3 and you really do like statement #3. The next time that you go to read a positive self-statement you decide that rather than moving on and reading positive self-statement #4, you would like to reread statement #3 again. All you would have to do is to go down to the next line on the personal recording card (SHOW THEM) and circle #3 after you read the statement aloud. UNDERSTAND? QUESTIONS? DEMONSTRATE THIS FOR THEM WITH SMILING POSITIVE SELF-STATEMENT. HAVE THEM DEMONSTRATE THIS FOR YOU FOUR (4) TIMES.

You have learned how to read and record positive self-statements correctly. I want you to continue to record your frequency of smiles too. Each time that you smile, you are to self-record this on your personal recording card and then read a positive self-statement aloud. After you read a positive self-statement aloud you are to circle the number which represents the statement. These numbers are found on the back of the card with the statements on them.

SMILING

SELF-RECORDING AND POSITIVE SELF-STATING

SUBJECT #3--CONDITION #1 (Day 16-Day 40)

DO YOU UNDERSTAND WHAT HAS BEEN EXPLAINED HERE?

WHAT QUESTIONS DO YOU HAVE?

DEMONSTRATE BOTH OF THE TECHNIQUES. SELF-RECORDING AND THE READING AND RECORDING OF THE NUMBER OF THE POSITIVE SELF-STATEMENT.

HAVE THE SUBJECT DEMONSTRATE A GOOD GRASP OF THE COMBINED CONCEPTS. FOUR (4) TIMES.

DEMONSTRATE (3) TIMES--HAVE THEM DO IT (1) TIME

DEMONSTRATE (3) TIMES--HAVE THEM DO IT (2) TIMES

DEMONSTRATE (2) TIMES--HAVE THEM DO IT (1) TIME

DEMONSTRATE (1) TIMES--HAVE THEM DO IT (1) TIME

DEMONSTRATE (1) TIMES--HAVE THEM DO IT (3) TIMES

INITIATION OF VERBAL INTERACTION

SUBJECT #3--CONDITION #1 (Day 21-Day 40)

IDENTICAL TO THE SUBJECT #3--CONDITION #1 SMILING

OK, you have been using both of self-recording and the reading and recording of a positive self-statement for smiling for about five days now. ANY PROBLEMS? QUESTIONS? Today you are to begin using these same techniques when you start conversations as well as when you smile. This will mean that when you smile or start a conversation you will use these same two methods in the same way. For example: You are resting in the hallway in a chair and another resident comes along. You smile at this resident. When you realize that you have smiled, you take out your personal recording card and circle a number on your frequency chart. As your instructions have

said, you also would read the positive self-statement of your choice and circle the number of the statement which you read aloud. Another resident walks by you and this time you speak to her for a few minutes or seconds. Under these new conditions you not only record this on your frequency card as you have been doing, but you also read a positive self-statement from your starting conversation personal recording card. Just as the smiling positive self-statements have been listed from 1 to 13 on the smiling personal recording cards, so have the positive self-statements been listed from 1 to 13 on the starting conversation personal recording cards. SHOW SUBJECT WHERE THEY ARE LOCATED. After you have read one of the positive self-statements, circle the number of the statement which you have just read. DO YOU UNDERSTAND? DEMONSTRATE THIS COMBINATION OF SELF-RECORDING AND POSITIVE SELF-STATEMENT WITH BOTH SMILING BEHAVIOR AND INITIATION OF VERBAL INTERACTION. HAVE SUBJECT DEMONSTRATE A GRASP OF THESE DIRECTIONS BY GIVING FIVE (5) EXAMPLES WITH BOTH BEHAVIORS INCLUDED.

INITIATION OF VERBAL INTERACTION
SELF-RECORDING AND POSITIVE SELF-STATING

SUBJECT # 3--CONDITION #1 (Day 21-Day 40)

MY DEMONSTRATION

1. A smile alone--SELF-RECORD AND POSITIVELY SELF-STATE, PUT STATEMENT NUMBER.
2. An initiation of verbal interaction--SELF-RECORD AND POSITIVELY SELF-STATE, PUT STATEMENT NUMBER.
3. Smile AND initiate verbal interaction--SELF-RECORD AND POSITIVELY SELF-STATE, PUT STATEMENT NUMBER.
4. Initiate verbal interaction--SELF-RECORD AND POSITIVELY SELF-STATE, PUT STATEMENT NUMBER.
5. Smile and initiate verbal interaction--SELF-RECORD AND POSITIVE SELF-STATEMENT FOR BOTH RESPONSES AND PUT THE POSITIVE SELF-

STATEMENT NUMBERS.

APPENDIX G

Smiling Positive Self-Statements

Read one of the positive self-statements below for each time that you smile. For each one that you read, circle the number of that statement on the reverse side of this card.

For each statement that you read, please circle the number of that statement below.

1. I am more attractive when I smile.
2. When I smile at someone, they sometimes smile back at me.
3. When I smile, it makes me feel good about myself.
4. When I smile at others they feel more comfortable towards me.
5. When I smile, others respond more openly towards me.
6. When I smile, others are nice to me.
7. When I smile, I feel good about myself.
8. When I make someone else smile, it makes me feel good.
9. When I smile, others react more positively towards me.
10. When I smile at someone, it makes them feel better.
11. When I smile at others, they look fondly into my eyes.
12. When I smile, others smile back sometimes.
13. When I smile, others are more friendly to me.

- [illegible]

APPENDIX F

Initiation of Verbal Interaction Positive Self-Statements

Read one of the positive self-statements below for each time that you initiate verbal interaction (according to the definition given to you). For each statement that you read, please circle the number of the statement on the reverse side of this card.

For each statement that you read, please circle the number of that statement below.

1. When I speak to others, they respond kindly to me.
2. When I speak to others first, they take an active interest in me.
3. When I speak to others, they speak back.
4. When I speak to others, they are friendly to me.
5. When I speak to others, I feel good about myself.
6. When I assert myself by speaking to others, I feel like a stronger person.
7. When I speak to others, they know that I care about them and I make them feel good.
8. When I speak to others, it helps them feel better.
9. When I speak to others, they find me to be a more attractive person.
10. When I speak to others, they act more warmly towards me.
11. When I speak to others, they are more at ease with me.
12. When I assert myself by speaking to others, I feel good about myself.
13. When I speak to others first, I am giving them some support that they may need.

- [illegible]

APPENDIX H

Self-Recording Cards for Smiling
and Initiation of Verbal Interactions

For each time that you initiate verbal interaction, (according to the definition given), please circle a number below, so that you can keep count of the number of times that you initiate verbal interaction.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
17 18 19 20 21 22 23 24 25 26 27 28 29
30 31 32 33 34 35 36 37 38 39 40 41 42
43 44 45 46 47 48 49 50 51 52 53 54 55
56 57 58 59 60 61 62 63 64 65 66 67 68
69 70 71 72 73 74 75 76 77 78 79 80 81
82 83 84 85 86 87 88 89 90 91 92 93 94
95 96 97 98 99 100 101 102 103 104 105

For each time that you smile, (according to the definition given), please circle a number below so that you can keep count of the number of times that you smile.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
17 18 19 20 21 22 23 24 25 26 27 28 29
30 31 32 33 34 35 36 37 38 39 40 41 42
43 44 45 46 47 48 49 50 51 52 53 54 55
56 57 58 59 60 61 62 63 64 65 66 67 68
69 70 71 72 73 74 75 76 77 78 79 80 81
82 83 84 85 86 87 88 89 90 91 92 93 94
95 96 97 98 99 100 101 102 103 104 105